Endangered Species Act - Section 7 Consultation

BIOLOGICAL OPINION

Antone Junction - John Day River Pavement Preservation Project
and Antone Junction Quarry (Fort Creek) Culvert Replacement
US-26, Wheeler County, Oregon

Agency: U.S. Federal Highway Administration

Consultation Conducted By: National Marine Fisheries Service,
Northwest Region

Date Issued: June 20, 2000

Refer to: OSB2000-0105

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I. BACKGROUND

On May 19, 2000, the National Marine Fisheries Service (NMFS) received a Biological Assessment (BA) and request from the Federal Highway Administration (FHWA) for Endangered Species Act (ESA) section 7 formal consultation for a pavement preservation project and a culvert replacement project in Wheeler County, Oregon. These projects are related and both are located along US Highway 26. The FHWA is partially funding the proposed projects, and is the lead federal agency for the consultation. The Oregon Department of Transportation (ODOT) has designed the projects and will administer the construction contract. This Biological Opinion (Opinion) is based on the information presented in the BA and the result of the consultation process.

The FHWA/ODOT has determined that the Middle Columbia River (MCR) steelhead (*Oncorhynchus mykiss*) may occur within the project area. The MCR steelhead was listed under the ESA on March 25, 1999 (64 FR 14517). The proposed project is within MCR steelhead critical habitat, which was designated February 16, 2000 (65 FR 7764).

The pavement preservation is planned for a 16.8 mile stretch of US-26 between milepost (MP) 81.6 and MP 98.4, 15 miles east of Mitchell in Wheeler County. The pavement overlay would be done under contract and would take place in the summer and fall of 2001. Portions of the overlay parallel Rock Creek and Mountain Creek within the John Day River watershed. In a separate but related action, the culvert on Fort Creek will be replaced at a service road crossing that accesses a rock pit at the junction of Antone Road and US-26 at MP 81.7. The rock pit is needed as a material source for the pavement overlay work. ODOT maintenance crews would replace the culvert during the in-water work period of July 15 to August 31, 2000. Fork Creek is a tributary of Mountain Creek, which is a tributary of Rock Creek, which empties into the mainstem John Day River at Picture Gorge.

The effects determination was made using the methods described in *Making ESA Determinations of Effect for Individual or Grouped Actions at the Watershed Scale* (NMFS 1996). The FWHA/ ODOT determined that the proposed action was likely to adversely affect the MCR steelhead.

This Opinion reflects the results of the consultation process. The consultation process involved correspondence and communications to obtain additional information and clarify the BA. As appropriate, modifications to the proposal to reduce impacts to the indicated species were discussed and incorporated into the proposed action. This included using guardrail insteand of road widening to meet current safety standards, thus minimizing impacts to Rock Creek and Mountain Creek. ODOT staff will plant alders and willows along Fort Creek within the ODOT right-of-way near the culvert replacement site.

The objective of this Opinion is to determine whether the actions to replace the culvert at Fort Creek and the pavement preservation along US-26 are likely to jeopardize the continued existence of the MCR steelhead or destroy or adversely modify its critical habitat.

II. PROPOSED ACTION

The FHWA/ODOT proposes to pave a 16.8 mile stretch of US-26 between MP 81.6 and MP 98.4, 15 miles east of Mitchell in Wheeler County. The preservation project will overlay the existing highway surface with 4 inches of emulsified asphalt concrete pavement. Guardrail improvements will be made at six structures. This work will take place in the summer and fall of 2001.

Along this stretch of US-26, the highway shoulder is directly upslope of Rock Creek and Mountain Creek in many locations. Mountain and Rock Creek flow immediately next to the highway, or within 100 feet of the highway, for a cumulative length of approximately 6 miles within the action area. In these locations, either straw bales or silt fencing will be place on the shoulder or embankment to prevent paving materials from rolling down the bank into the streams. The highway will not be widened in locations where the road is adjacent to Rock or Mountain Creeks.

The asphalt plant will be located on the west side of Fort Creek in the stockpile area. No facilities or activities associated with the asphalt plant will be located within 100 feet of Fort Creek. Containment will be placed around all fuel and asphalt tanks. The capacity of the containment measures will be 100%, at a minimum. Silt fencing will be place along Fort Creek (at the 100 foot riparian setback) to provide additional protection.

The FHWA/ODOT also proposes to replace the culvert at the intersection of Fort Creek and the service road that accesses the Antone Rock Pit. This culvert washed out during the 1996-1997 flood events. An ODOT maintenance crew will replace the culvert during the in-water work period of July 15 to August 31, 2000, as defined by the Oregon Department of Fish and Wildlife (ODFW). A rail car was placed across Fort Creek in early 2000 to serve as temporary access. The rail car is the property of Wheeler County and the county wants it back. No new fill material was used to place the rail car across Fort Creek. The new culvert will be a round corrugated metal pipe, 6 feet in diameter and 26.4 feet long. The pipe will be countersunk 1.5 feet and seeded with angular rocks approximately 2 feet in diameter. The fish rocks will gather and hold bedload to simulate natural stream bottom conditions. The new culvert will be installed at the same location as the old one because this will minimize impacts on natural stream banks and riparian vegetation.

To place the culvert, a backhoe will excavate the creek bed so that the culvert can be countersunk. The backhoe will remain on the bank, and be operated from the bank with only the bucket entering the stream. Approximately 45 cubic yards of fill into the Fort Creek floodplain will be required. There will be approximately 65 cubic yards of removal. Access to the bank where the backhoe will operate has already been created in the past as part of pit development, and no vegetation will need to be removed for access. Two or three small willows may need to be removed to place the new culvert. If water is flowing in Fort Creek, the excavation site will be de-watered using a method approved by the ODFW and the creek will be diverted past the

work site. Sedimats and straw bales will be placed in the creek downstream of the work site to minimize sediment entrainment. The culvert placement will take one to three days to complete.

No riprap will be placed at the inlet or outlet of the culvert. The backfill around the pipe will be granular material to keep the culvert from washing out again. Natural stream rock will be placed inside the culvert to simulate a natural stream bottom.

III. BIOLOGICAL INFORMATION AND CRITICAL HABITAT

The MCR steelhead Evolutionarily Significant Unit (ESU) was listed as threatened under the ESA by the NMFS on March 25, 1999 (64 FR 14517). Biological information concerning the MCR steelhead is found in Busby et al. (1995, 1996). Critical habitat was designated for the MCR steelhead on February 16, 2000 (65 FR 7764). Critical habitat for MCR steelhead includes the major Columbia River tributaries known to support this ESU including the Deschutes, John Day, Klickitat, Umatilla, Walla Walla, and Yakima Rivers, as well as the Columbia River and estuary. The adjacent riparian zone is included in this designation. The riparian zone is defined as the area that provides the following functions: Shade, sediment, nutrient or chemical regulation, streambank stability, input of large woody debris or organic matter, and others.

IV. EVALUATING PROPOSED ACTIONS

The standards for determining jeopardy are set forth in section 7(a)(2) of the ESA as defined by 50 CFR Part 402 (the consultation regulations). NMFS must determine whether the action is likely to jeopardize the listed species and/or whether the action is likely to destroy or adversely modify critical habitat. This analysis involves the: (1) Definition of the biological requirements and current status of the listed species; and (2) evaluation of the relevance of the environmental baseline to the species' current status.

Subsequently, NMFS evaluates whether the action is likely to jeopardize the listed species by determining if the species can be expected to survive with an adequate potential for recovery. In making this determination, NMFS must consider the estimated level of mortality attributable to: (1) Collective effects of the proposed or continuing action; (2) the environmental baseline; and (3) any cumulative effects. This evaluation must take into account measures for survival and recovery specific to the listed salmonid's life stages that occur beyond the action area. If NMFS finds that the action is likely to jeopardize, NMFS must identify reasonable and prudent alternatives for the action.

Furthermore, NMFS evaluates whether the action, directly or indirectly, is likely to destroy or adversely modify the listed species' designated critical habitat. The NMFS must determine whether habitat modifications appreciably diminish the value of critical habitat for both survival and recovery of

the listed species. The NMFS identifies those effects of the action that impair the function of any essential element of critical habitat. The NMFS then considers whether such impairment appreciably diminishes the habitat's value for the species' survival and recovery. If NMFS concludes that the action will destroy or adversely modify critical habitat it must identify any reasonable and prudent alternatives available.

For the proposed action, NMFS' jeopardy analysis considers direct or indirect mortality of fish attributable to the action. NMFS' critical habitat analysis considers the extent to which the proposed action impairs the function of essential biological elements necessary for juvenile and adult migration, spawning, and rearing of the MCR steelhead under the existing environmental baseline.

A. Biological Requirements

The first step the NMFS uses when applying the ESA section 7(a)(2) to listed steelhead is to define the species' biological requirements that are most relevant to each consultation. The NMFS also considers the current status of the listed species taking into account population size, trends, distribution and genetic diversity. To assess the current status of the listed species, NMFS starts with the determinations made in its decision to list MCR steelhead for ESA protection and also considers new data available that is relevant to the determination.

The relevant biological requirements are those necessary for MCR steelhead to survive and recover to naturally reproducing population levels at which protection under the ESA would become unnecessary. Adequate population levels must safeguard the genetic diversity of the listed stock, enhance their capacity to adapt to various environmental conditions, and allow them to become self-sustaining in the natural environment.

For this consultation, the biological requirements are improved habitat characteristics that function to support successful adult and juvenile migration, spawning and rearing. The current status of the MCR steelhead, based upon their risk of extinction, has not significantly improved since the species was listed. The serious declines in abundance in the John Day River Basin are especially troublesome, because the John Day River once supported the largest populations of naturally spawning summer steelhead in the MCR ESU. The general pattern in abundance for these populations was a low point during the late 1970s followed by an increasing trend leading to peak counts during the late 1980s. In recent years, all populations have declined to lows that are similar to counts observed in the late 1970s.

B. Environmental Baseline

The current range-wide status of the identified ESU may be found in Busby et al. (1995, 1996). The proposed action will occur within the range of MCR steelhead. The defined action area is the area that is directly and indirectly affected by the proposed action. The direct effects occur at the project site

and may extend upstream or downstream based on the potential for impairing fish passage, stream hydraulics, sediment and pollutant discharge, and the extent of riparian habitat modifications. Indirect affects may occur throughout the watershed, where actions described in this opinion lead to additional activities, or affect ecological functions, contributing to stream or riparian habitat degradation. As such, the action area for the proposed activities include the immediate portions of the watershed containing the project and those areas upstream and downstream that may reasonably be affected, temporarily or in the long term. For the purposes of this Opinion, the action area is defined as the streambed and riparian habitat of Fort Creek, Rock Creek and Mountain Creek. The action area extends 200 feet upstream and downstream of the culvert site of Fort Creek, and downstream from project activities for Rock Creek and Mountain Creek. Other areas of the John Day River watershed are not expected to be directly or indirectly impacted.

Fort Creek is a tributary of Mountain Creek, which is a tributary of Rock Creek, which empties into the mainstem John Day River at Picture Gorge. Summer steelhead are present in the John Day River watershed, including tributaries in the action area. According to ODFW, summer steelhead spawn and rear in Fort Creek. Spawning takes place in Fort Creek upstream of the culvert replacement site to the National Forest boundary, 3 miles upstream of the project site. According to StreamNet, habitat use in Mountain Creek within the action area is primarily spawning, rearing, and migration. Habitat use in Rock Creek is primarily rearing and migration.

Rock Creek, Mountain Creek, and Fort Creek are designated as Essential Salmon Habitat by the Oregon Department of State Lands (DSL). All three creeks are on Oregon Department of Environmental Quality's (ODEQ) list of water quality limited segments (Clean Water Act §303(d)) for summer water temperature. Land use in the vicinity or the project is primarily grazing, with limited hay production on wet meadows along Rock Creek and upstream of the project. The headwaters originate to the south in coniferous forests within the Ochoco National Forest.

Habitat quality within Fort Creek is fair to poor, with riparian vegetation intermittent and clumped along the creek. Habitat constraints are lack of riparian vegetation, high temperatures, poor instream cover, lack of high quality pools, and sedimentation. Teasel and grasses grow on the banks near the existing temporary rail car bridge, and willows grow on the banks and in the braided channel downstream of the installation site. The 1996-1997 floods scoured the channel bottom where the original culvert pipe lay, and the current bottom of the creek is covered with rocks likely put there during installation of the original culvert pipe.

Habitat quality for Mountain Creek is considered fair. Major habitat constraints have been identified as poor instream cover, lack of high quality pools, high temperatures, and sedimentation. Mountain and Rock Creek flow immediately next to the highway, or within 100 feet of the highway, for a cumulative length of approximately 6 miles (36% of the project length) within the action area. The stream channel, where it flows near the highway, is constricted by the road fill for a total length of 4.7 miles within the action area. In certain reaches, the riparian zone along Rock Creek and Mountain Creek is dominated

by alders that provide good shading of the streams. In other reaches, the riparian vegetation is dominated by willows that provide poor shading of the creeks.

Based on the best available information on the current status of MCR steelhead range-wide; the population status, trends, and genetics; and the poor environmental baseline conditions within the action area (as described in the BA), NMFS concludes that the biological requirements of the identified ESU within the action area are not currently being met. Numbers of MCR steelhead are substantially below historic numbers with decreasing long-term trends. Degraded freshwater habitat conditions have contributed to the decline. Use of the NMFS Matrix of Pathways and Indicators (NMFS 1996) identified the following habitat indicators as either at risk or not properly functioning within the action area: Summer water temperatures, turbidity/sediment, nutirents, substrate, large woody debris, pool frequency and quality, off-channel habitat, refugia, streambank condition, floodplain connectivity, drainage network increase, road density and location, disturbance history, and riparian reserves. Actions that do not maintain or restore properly functioning aquatic habitat conditions have the potential to jeopardize the continued existence of MCR steelhead.

V. ANALYSIS OF EFFECTS

A. Effects of Proposed Action

The effects determination in this Opinion was made using a method for evaluating current aquatic conditions, the environmental baseline, and predicting effects of actions on them. This process is described in the document, *Making ESA Determinations of Effect for Individual or Grouped Actions at the Watershed Scale* (NMFS 1996). The effects of proposed actions are expressed in terms of the expected effect (restore, maintain, or degrade) on aquatic habitat factors in the project area.

The proposed action has the potential to cause the following impacts to threatened MCR steelhead or designated critical habitat:

1. In-water work will be needed to place the culvert in Fort Creek. The existing stream bed will be excavated to install the new pipe. However, the existing channel was modified when the original culvert was installed, and is still in a disturbed condition. The creek channel is covered with rocks likely put there during the installation of the original pipe. Excavation and installation activities pose some risk of mortality to rearing juvenile steelhead that may be present. The in-water activities will likely displace fill in the vicinity to reaches upstream and downstream of the site. Fish passage would be disrupted during the one to three-day period of culvert installation.

2. The in-water work has the potential to increase turbidity in the streams over the short term. Larger juvenile and adult salmon appear to be less affected by ephemerally high concentrations

of suspended sediments that occur during most storms and episodes of snow melt than younger fish. However, other research demonstrates that feeding and territorial behavior can be disrupted by short-term exposure to turbid water. Localized increases of turbidity during in-water work will likely displace steelhead in the project area and disrupt normal behavior. Impacts to fish at that time are expected to be temporary and localized. The problem will be most acute during the approximately 3 days of in-water work, but will extend at a lower level until the site has stabilized.

3. Installing the culvert may require the removal of two or three small willows. Fill around the new pipe would cover grasses and forbs, and the fill would encroach on the existing channel. These plants provide some shade, nutrient regulation, flow attenuation, leaf litter input, and other functions.

4. The paving operation is expected to result in small amounts of asphalt dropping into the adjacent stream in several places where the highway shoulder is directly above Rock Creek and Mountain Creek and the shoulder is too narrow to allow any type of barrier (e.g., straw bales, silt fence) to be erected to prevent paving materials from rolling down the bank into the stream. The asphalt concrete pavement mixtures contain polycyclic aromatic hydrocarbon (PAH) compounds. Many PAH compounds are known to adversely affect aquatic organisms. Elevated concentrations of PAHs have been associated with changes in physiology, abnormal fin development, occurrence of hepatic lesions and tumors, cataracts, reduced reproductive output, and decreased juvenile survival in fish (Cooper et al. 1996). Asphalt material that drops into the stream during paving could release PAHs. The amount of asphalt and concentration of PAH would likely be very low, and dilution by the flowing streams would minimize bioaccumulation in any aquatic organisms.

5. Staging activities during construction may result in a spill of hazardous materials. In addition, operation of machinery within and near the creeks will increase the risk of a hazardous spill in the creeks.

The effects of these activities on MCR steelhead and aquatic habitat factors will be limited by implementing construction methods and approaches that are included in project design and are intended to avoid or minimize impacts. These include:

1. All in-water work will be conducted during the ODFW in-water work period of July 1 through August 31. This will avoid impacts to migrating adult steelhead. Culvert installation is anticipated to require a maximum of 3 days of in-water work.

2. The excavation of the stream bed will be done from the bank and will not require the backhoe to operate in the flowing stream, other than the bucket.

3. No riprap will be placed around the outlet or inlet of the culvert. The culvert will be countersunk and rocks will be placed inside the culvert to simulate a natural stream bottom.

4. The erosion control measures identified in the project design will minimize the amount of sediment entrained in the creeks during the in-water construction period. An erosion control plan will be implemented that includes Sedimats sediment filters and routine monitoring. Proper implementation of erosion and sediment controls should be adequate to minimize sediment inputs into the river during the in-water work. The sediment containment devices and erosion control devices will be inspected daily during the construction period to ensure that the devices are properly functioning.

5. The work site will be isolated during in-water work and fish passage will be provided during construction if water is flowing during the in-water work period.

6. All vegetation removed will be replaced at a 1.5:1 ratio (minimum) with native plant species. Willow and alder will be planted within the action area.

7. Hazardous materials, including fuel, will not be stored or transferred within 165 feet of the two-year floodplain of any waterbody. No staging areas or parking areas will occur within 165 feet of the two-year floodplain. This will reduce the likelihood of a spilled toxic substance reaching the river. Spill containment booms will be maintained on-site at all times during construction operations and/or staging of equipment or fueling supplies. Fueling trucks will maintain a spill containment boom at all times.

8. Any equipment that is to come in contact with the flowing channel will be inspected daily for leaks prior to working in the flowing stream. External oil, grease, and mud will be removed from equipment using steam cleaning, and this will be done at least 165 feet away from the two-year floodplain. The equipment will be inspected by the project inspector prior to each entry into the flowing stream. Untreated wash and rinse water must be adequately treated prior to discharge into the stream.

9. Excavated and stored materials will be staged in stable upland sites. All applicable erosion control standards will be required during stockpiling of materials.

The action also includes habitat restoration activities to mitigate for the in-water work. ODOT Mainenance staff and the Region Environmental Coordinator will plant willows and alders along Fort Creek within the ODOT right-of-way near the culvert site. The planting will take place in the fall of 2000, and will be completed prior to the letting of the paving contract.

For the proposed action, the NMFS expects that the effects of the proposed project will tend to maintain each of the habitat elements over the long term, greater than two years. However, in the short

term, a temporary increase in sediment entrainment and turbidity, and disturbance of riparian and in-stream habitat is expected. Fish may be killed or temporarily displaced during the in-water work. The potential net effect from the proposed action, including proposed plantings, is expected to be the maintenance and restoration of functional steelhead habitat conditions.

B. Effects on Critical Habitat

NMFS designates critical habitat based on physical and biological features that are essential to the listed species. Essential features for designated critical habitat include substrate, water quality, water quantity, water temperature, food, riparian vegetation, access, water velocity, space and safe passage. Critical habitat for MCR steelhead consists of all waterways below naturally impassable barriers including the project area. The adjacent riparian zone is also included in the designation. This zone is defined as the area that provides the following functions: Shade, sediment, nutrient or chemical regulation, streambank stability, input of large woody debris or organic matter, and others.

The proposed actions will affect critical habitat. In the short term, a temporary increase of sediments and turbidity, and disturbance of riparian and in-stream habitat is expected. No long term loss of habitat will occur. Riparian habitat along Fort Creek will be maintained or improved through the proposed plantings. Consequently, NMFS does not expect that the net effect of this action will diminish the long-term value of the habitat for survival of MCR steelhead.

C. Cumulative Effects

Cumulative effects are defined in 50 CFR 402.02 as "those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation." The action area is defined as the streambed and riparian habitat of Fort Creek, Rock Creek and Mountain Creek. The action area extends 200 feet upstream and downstream of the culvert site of Fort Creek, and downstream from project activities for Rock Creek and Mountain Creek. A wide variety of actions occur within the watersheds defined within the Opinion. NMFS is not aware of any significant change in non-Federal activities that are reasonably certain to occur within the action area. NMFS assumes that future private and State actions will continue at similar intensities as in recent years. Future FHWA/ODOT transportation projects are planned in the John Day River watershed. Each of these projects will be reviewed through separate section 7 consultations and are not considered cumulative effects.

VI. CONCLUSION

NMFS has determined based on the available information, that the proposed action is expected to maintain properly functioning stream habitat conditions within the action area over the long term. As such, the proposed action covered in this Opinion is not likely to jeopardize the continued existence of

MCR steelhead. NMFS used the best available scientific and commercial data to apply its jeopardy analysis, when analyzing the effects of the proposed action on the biological requirements of the species relative to the environmental baseline, together with cumulative effects. NMFS applied its evaluation methodology (NMFS 1996) to the proposed action and found that it would cause minor, short-term adverse degradation of anadromous salmonid habitat due to sediment impacts and in-water construction. These effects will be mitigated over the long term through the implementation of proposed plantings.

VII. CONSERVATION RECOMMENDATIONS

Section 7 (a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. Conservation recommendations are discretionary measures suggested to minimize or avoid adverse effects of a proposed action on listed species, to minimize or avoid adverse modification of critical habitat, or to develop additional information. The NMFS does not recommend any additional measures to those general minimization and avoidance measures as described in the BA.

VIII. REINITIATION OF CONSULTATION

Consultation must be reinitiated if: The amount or extent of taking specified in the Incidental Take Statement is exceeded, or is expected to be exceeded; new information reveals effects of the action may affect listed species in a way not previously considered; the action is modified in a way that causes an effect on listed species that was not previously considered; or, a new species is listed or critical habitat is designated that may be affected by the action (50 CFR 402.16). To re-initiate consultation, FHWA should contact the Habitat Conservation Division (Oregon Branch Office) of NMFS.

IX. REFERENCES

Section 7(a)(2) of the ESA requires biological opinions to be based on "the best scientific and commercial data available." This section identifies the data used in developing this opinion.

Busby, P., S. Grabowski, R. Iwamoto, C. Mahnken, G. Matthews, M. Schiewe, T. Wainwright, R. Waples, J. Williams, C. Wingert, and R. Reisenbichler. 1995. Review of the status of steelhead (*Oncorhynchus mykiss*) from Washington, Idaho, Oregon, and California under the U.S. Endangered Species Act. 102 p. plus 3 appendices.

Busby, P., T. Wainwright, G.J. Bryant, L.J. Lierheimer, R.S. Waples, and I.V. Lagomarsino. 1995. Status review of west coast steelhead from Washington, Idaho, Oregon, and California.

Cooper, S.D., K.W. Kratz, G. Forrester, and S. Wiseman. 1996. The impact of runoff fromasphaltic products on stream communities in California. Final Report No. FHWA/CA/TL-96/24. Marine Science Institure, Univ. Calif., Santa Barbara for Calif. Dept. Transportation in cooperation with U.S. Dept. Transportation, Federal Highway Administration. 113 pp.

DEQ 1996. 303d List of Water Quality Limited Streams, as Required Under the Clean Water Act. Oregon Department of Environmental Quality (DEQ), Portland, Or. 1996. (www.deq.state.or.us/wq/303dlist/303dpage.htm).

DEQ 1998. Draft 303d List of Water Quality Limited Streams, as Required Under the Clean Water Act. Oregon Department of Environmental Quality (DEQ), Portland, Or. 1998. (www.deq.state.or.us/wq/303dlist/303dpage.htm).

DSL 1996. Essential Indigenous Salmonid Habitat, Designated Areas, (OAR 141-102-030). Oregon Division of State Lands. Portland, Or. 1996.

NMFS 1996. Making Endangered Species Act determinations of effect for individual and grouped actions at the watershed scale. Habitat Conservation Program, Portland, Oregon.

ODFW 1996. Database -- Salmonid Distribution and Habitat Utilization, Arc/Info GIS coverages. Portland, Or. 1996. (rainbow.dfw.state.or.us/ftp/).

X. INCIDENTAL TAKE STATEMENT

Sections 4 (d) and 9 of the ESA prohibit any taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct) of listed species without a specific permit or exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, and sheltering. Harass is defined as actions that create the likelihood of injuring listed species to such an extent as to significantly alter normal behavior patterns which include, but are not limited to, breeding, feeding, and sheltering. Incidental take is take of listed animal species that results from, but is not the purpose of, the Federal agency or the applicant carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

An incidental take statement specifies the impact of any incidental taking of endangered or threatened species. It also provides reasonable and prudent measures that are necessary to minimize impacts and sets forth terms and conditions with which the action agency must comply in order to implement the reasonable and prudent measures.

A. Amount or Extent of the Take

The NMFS anticipates that the action covered by this Opinion has more than a negligible likelihood of resulting in incidental take of MCR steelhead because of detrimental effects from increased sediment levels (non-lethal) and equipment working in the stream and the placement of the culvert (lethal and non-lethal). Effects of actions such as these are largely unquantifiable in the short term, and are not expected to be measurable as long-term effects on steelhead habitat or population levels. Therefore, even though NMFS expects some low level of incidental take to occur due to the actions covered by this Opinion, the best scientific and commercial data available are not sufficient to enable NMFS to estimate a specific amount of incidental take to the species itself. In instances such as these, the NMFS designates the expected level of take as "unquantifiable." Based on the information in the biological assessment, NMFS anticipates that an unquantifiable amount of incidental take could occur as a result of the actions covered by this Opinion. The extent of the take is limited to the culvert replacement site on Fort Creek, extending 50 feet downstream of the culvert.

B. Reasonable and Prudent Measures

The NMFS believes that the following reasonable and prudent measures are necessary and appropriate to minimizing take of the above species. Minimizing the amount and extent of take is essential to avoid jeopardy to the listed species.

1. To minimize the amount and extent of incidental take from construction activities at the Fort Creek culvert, measures shall be taken to limit the duration and extent of in-water work, and to time such work when the impacts to MCR steelhead are minimized.
2. To minimize the amount and extent of incidental take from construction activities in or near the creek, effective erosion and pollution control measures shall be developed and implemented throughout the area of disturbance, throughout the road pavement area and the culvert replacement site, and all potentially impacted site downstream. The measures shall minimize the movement of soils and sediment both into and within the river, and will stabilize bare soil over both the short term and long term.
3. To minimize the amount and extent of take from loss of in-stream habitat and to minimize impacts to critical habitat, measures shall be taken to minimize impacts to riparian and in-stream habitat, or where impacts are unavoidable, to replace or restore lost riparian and in-stream function.
4. To ensure effectiveness of implementation of the reasonable and prudent measures, all erosion control measures shall be monitored and evaluated both during and following construction and meet criteria as described below in the terms and conditions.

C. Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the ESA, FHWA/ODOT must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. Implementation of the terms and conditions within this Opinion will further reduce the risk of impacts to fish and the John Day River watershed. These terms and conditions are non-discretionary.

1. In-water work:

   a. Passage shall be provided for both adult and juvenile forms of all salmonid species throughout the construction period. The FHWA/ODOT designs will ensure passage of fishes as per ORS 498.268 and ORS 509.605 (Oregon's fish passage guidance).

   b. All work within the active channel of all anadromous fish-bearing systems, or in systems which could potentially contribute sediment or toxicants to downstream fish-bearing systems, will be completed within ODFW's in-water work period (July 15 to August 31). Any extensions of the in-water work period will first be approved by, and coordinated with, NMFS.

   c. If water is present in the stream during the in-water work, all work will be done within a cofferdam (made out of sandbags, sheet pilings, inflatable bags, etc.), or similar structure, to minimize the potential for sediment entrainment. If no water is present, erosion control measures will be implemented that ensure no excess sediment is left on the stream bed or riparian area.

   e. Alteration or disturbance of stream banks and existing riparian vegetation will be minimized.

   f. During excavation, native streambed materials will be stockpiled out of the two-year floodplain for later project use.

2. Erosion and Pollution Control

An Erosion Control Plan (ECP) will be prepared by ODOT or the contractor, and implemented by the Contractor. The ECP will outline how and to what specifications various erosion control devices will be installed to meet water quality standards, and will provide a specific inspection protocol and time response. Erosion control measures shall be sufficient to ensure compliance with applicable water quality standards and this Opinion. The ECP shall be maintained on site and shall be available for review upon request.

a. Erosion Control measures shall include (but not be limited to) the following:

   i. The contractor will have the following on hand: Weed-free straw bales, unsupported silt fence, and biobags. The purpose is to address unexpected rain events, or failure of other measures to contain sediment.
   ii. Temporary plastic sheeting for immediate protection of unvegetated areas (where seeding/ mulching are not appropriate), in accordance with ODOT's standard specifications.
   iii. Erosion control blankets or heavy duty matting (e.g., jute) may be used on steep unstable slopes in conjunction with seeding or prior to seeding.
   iv. Sills or barriers may be placed in drainage ditches along cut slopes and on steep grades to trap sediment and prevent scouring of the ditches. The barriers will be constructed from rock and straw bales.
   v. Biobags, weed-free straw bales and loose straw may be used for temporary erosion control. Temporary erosion and sediment controls will be used on all exposed slopes during any hiatus in work on exposed slopes.

b. Effective erosion control measures shall be in-place at all times during the contract. Construction within the 5-year floodplain will not begin until all temporary erosion controls (e.g., straw bales, silt fences) are in-place, downslope of project activities within the riparian area. Erosion control structures will be maintained throughout the life of the contract.

c. All temporarily-exposed areas will be seeded and mulched. Erosion control seeding and mulching, and placement of erosion control blankets and mats (if applicable) will be completed on all areas of bare soil within 7 days of exposure within 150 feet of waterways, wetlands or other sensitive areas, and in all areas during the wet season (after October 1). All other areas will be stabilized within 14 days of exposure. Efforts will be made to cover exposed areas as soon as possible after exposure.

d. All erosion control devices will be inspected during construction to ensure that they are working adequately. Erosion control devices will be inspected daily during the rainy season, weekly during the dry season, monthly on inactive sites. Work crews will be mobilized to make immediate repairs to the erosion controls, or to install erosion controls during working and off-hours. Should a control measure not function effectively, the control measure will be immediately repaired or replaced. Additional erosion controls will be installed as necessary.

e. If soil erosion and sediment resulting from construction activities is not effectively controlled, the engineer will limit the amount of disturbed area to that which can be adequately controlled.

f. Sediment will be removed from sediment controls once it has reached 1/3 of the exposed height of the control. Whenever straw bales are used, they will be staked and dug into the ground 12 cm. Catch basins shall be maintained so that no more than 15 cm of sediment depth accumulates within traps or sumps.

g. Where feasible, sediment-laden water created by construction activity shall be filtered before it leaves the right-of-way or enters an aquatic resource area. Silt fences or other detention methods will be installed as close as possible to culvert outlets to reduce the amount of sediment entering aquatic systems.

h. A supply of erosion control materials (e.g., straw bales and clean straw mulch) will be kept on hand to cover small sites that may become bare and to respond to sediment emergencies.

i. All equipment that is used for in-stream work will be cleaned prior to entering the two-year floodplain. External oil and grease will be removed, along with dirt and mud. Untreated wash and rinse water will not be discharged into streams and rivers without adequate treatment. If seeded during the dry period, then the seed will be watered to ensure germination.

j. On cut slopes steeper than 1:2, a tackified seed mulch will be used so that the seed does not wash away before germination and rooting occurs. In steep locations, a hydro-mulch will be applied at 1.5 times the normal rate.

k. Material removed during excavation shall only be placed in locations where it cannot enter sensitive aquatic habitat. Conservation of topsoil (removal, storage and reuse) will be employed.

l. Measures will be taken to prevent construction debris from falling into any aquatic habitat. Any material that falls into a stream during construction operations will be removed in a manner that has a minimum impact on the streambed and water quality.

m. Project actions will follow all provisions of the Clean Water Act (40 CFR Subchapter D) and DEQ's provisions for maintenance of water quality standards not to be exceeded within the John Day River (OAR Chapter 340, Division 41). Toxic substances shall not be introduced above natural background levels in waters of the state in amounts which may be harmful to aquatic life. Any turbidity caused by this project shall not exceed DEQ water quality standards.

n. The Contractor will develop an adequate, site-specific Spill Prevention and Countermeasure or Pollution Control Plan (PCP), and is responsible for containment

and removal of any toxicants released. The Contractor will be monitored by the ODOT Engineer to ensure compliance with this PCP. The PCP shall include the following:

i. A site plan and narrative describing the methods of erosion/sediment control to be used to prevent erosion and sediment for contractor's operations related to disposal sites, borrow pit operations, haul roads, equipment storage sites, fueling operations and staging areas.
ii. Methods for confining and removing and disposing of excess concrete, cement and other mortars. Also identify measures for equipment washout facilities.
iii. A spill containment and control plan that includes; notification procedures, specific containment and clean up measures which will be available on site, proposed methods for disposal of spilled materials, and employee training for spill containment.
iv. Measures to be used to reduce and recycle hazardous and non-hazardous waste generated from the project, including the following: the types of materials, estimated quantity, storage methods, and disposal methods.
v. The person identified as the Erosion and Pollutant Control Manager (EPCM) shall also be responsible for the management of the contractor's PCP.

o. Areas for fuel storage, refueling and servicing of construction equipment and vehicles will be located at least 165 feet away from the 2-year floodplain of any waterbody. Overnight storage of wheeled vehicles must occur at least 165 feet away from the 2-year floodplain of any waterbody. Overnight storage of non-wheeled vehicles (e.g. crane, pile driver) is allowed within the 2-year floodplain during the in-water work window; however, to minimize the risk of fuel reaching the water, refueling of these vehicles must not occur after 1 pm (so the vehicles do not have full tanks overnight).

p. Hazmat booms will be installed in all aquatic systems where:

i. Significant in-water work will occur, or where significant work occurs within the 5-year floodplain of the system, or where sediment/toxicant spills are possible.
ii. The aquatic system can support a boom setup (i.e. the creek is large enough, low-moderate gradient).

q. Hazmat booms will be maintained on-site in locations where there is potential for a toxic spill into aquatic systems. "Diapering" of vehicles to catch any toxicants (oils, greases, brake fluid) will be mandated when the vehicles have any potential to contribute toxic materials into aquatic systems.

r. No surface application of nitrogen fertilizer will be used within 50 feet of any aquatic resource.

3. Riparian Habitat Protection Measures

a. Boundaries of the vegetation clearing limits will be flagged by the project inspector. Ground will not be disturbed beyond the flagged boundary.

b. Alteration of native vegetation will be minimized. Where possible, native vegetation will be clipped by hand so that roots are left intact. This will reduce erosion while still allowing room to work. No protection will be made of invasive exotic species (e.g. Himalayan blackberry), although no chemical treatment of invasive species will be used.

c. Riparian understory and overstory vegetation removed will have a replacement rate of l.5:1, at a minimum. Replacement will occur within the project vicinity where possible and within the Fort Creek watershed at a minimum. Any disturbed riparian area must be planted with native trees and shrubs.

d. The FHWA/ODOT will construct fences along the highway that will exclude livestock from the highway as well as from newly planted replacement vegetation, as appropriate.

4. Monitoring

a. Erosion control measures as described above in 2(d) shall be monitored. Erosion control and pollution control measures will be monitored daily to ensure adequate water quality.

b. All significant riparian replant areas will be monitored to insure the following:

i. Finished grade slopes and elevations will perform the appropriate role for which they were designed.
ii. Plantings are performing correctly and have an adequate success rate (success rate necessary depends on the planting density but the goal is to have a functional riparian vegetation community).

c. Failed plantings and structures will be replaced, if replacement would potentially succeed. If not, plantings at other appropriate locations will be done after coordination with NMFS.

d. A plant establishment period (3 year minimum) will be required for all riparian mitigation plantings. In extremely unstable or unproductive areas, ODOT may be released from the establishment period and develop a larger replanting area to compensate for this. The release from the establishment period will require coordination with NMFS.

e. By December 31 of the year following construction, FHWA/ODOT shall submit to NMFS (Oregon Branch) a monitoring report with the results of the monitoring required in terms and conditions (4(a) to 4(c) above).